AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for ~~performing~~ identifying heterologous DNA, which causes, on its expression, an electrophysiological ~~measurements~~ change in a cell comprising the steps of:

(i) providing a substrate for making the electrophysiological measurements upon which at least one cell can be arranged;

(ii) providing a plurality of cells, each cell comprising a different heterologous DNA sequence, ~~derived from~~ said DNA sequence being a member of a DNA library, wherein each cell expresses the heterologous DNA sequence it comprises:

(iii) arranging the plurality of cells provided in step (ii) on the substrate to permit detection and/or measurement of a change (in comparison to a control cell) in the electrophysiology of each cell, said change being a result of expression of the heterologous DNA sequence, and

(iv) identifying at least one cell of interest, which shows ~~at least one phenotypic change~~ a change in its elecrophysiology as measured in step (iii), characterized in that, the method comprises the further steps of:

isolating the cell of interest, and/or genetic material therefrom; and isolating mRNA from the cell of interest ~~identified~~ showing a change in its electrophysiology as measured in step (iii).

2. (Previously Presented) The method as claimed in Claim 1, wherein the method further comprises the step of sequencing the genetic material.

3. (Previously Presented) The method as claimed in Claim 2, wherein the method further comprises the step of storing or recording the sequence information on an information carrier.

4. - 6. (Cancelled)

7. (Previously Presented) The method as claimed in Claim 1, wherein the DNA library is a cDNA library.

8. (Previously Presented) The method as claimed in Claim 1, wherein the change in the electrophysiology of the cell is detected and/or measured by patch clamping.

9. (Previously Presented) The method as claimed in Claim 1, wherein the cell is treated with a test agent before step (iii).

10. (Previously Presented) The method as claimed in Claim 9, wherein the test agent is selected from at least one of the following: small organic molecules, small peptides, neurotransmitters, hormones and cytokines.

11. (Previously Presented) The method as claimed in Claim 1, wherein the cell is an animal cell.

12. (Previously Presented) The method as claimed in Claim 1, wherein the animal cell is selected from: Human Embryonic Kidney 293 (HEK293), Chinese Hamster Ovary (CHO), COS, MDCK, NG108, NIH3T3 or T84.

13. (Currently Amended) The method as claimed in Claim 1, wherein the cells are arranged at spaced-apart locations ~~in or~~ on the substrate.

14. (Previously Presented) The method as claimed in Claim 3, wherein said information carrier is a computer disk.